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in Austria**

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Introduction¹

This paper looks at the evolution of disposable household income distribution over the last 17 years, excluding income from self-employment and capital income², but including all cash transfers from public sources. The major source of income is earnings from dependent employment. An understanding of the driving forces behind changes in the dispersion of earnings is called for if one wants to devise policies to counter negative economic and social effects of a widening of earnings differentials. This paper gives emphasis to the earnings development at the lower end of the earnings distribution in order to document the environment of marginalised groups of workers and its development over time. The main objective is, to provide more insight into the dynamics of the socio-economic ramifications of marginalisation. Thus emphasis is given to data capturing changes over time rather than more detail at the most recent point in time.

The data source is microeconomic data (micro census) from household surveys in 1999, 1993 and 1983. Note should be taken that the data does not provide a comprehensive picture of household earnings since self-employed and family helpers are not included³. The data source is, however, the only one which links information on income from the early 1980s to the end of the 1990s; if one aims at a more comprehensive insight into household income at a point in time, one has to consult the household budget survey (Konsumerhebung) of 1999/2000⁴. The latter does not only include income from dependent employment and transfer payments, but also from self-employment and property/capital/wealth (Vermögenseinkommen) and household expenditures. The household budget survey has

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² The exception are occupational pensions and private transfers, which are included in order to be able to judge the income situation of the retirement age population.

³ Questions on income have been included bi-annually in the Austrian micro census (household survey, which is a representative 1% household sample) since 1981. The income question is only to be answered by persons who are not self-employed or family helpers; some household income from self-employed work is, however, included, e.g., the case of outsourced contract work (Werkverträge etc.).

⁴ An even more comprehensive information on the income distribution in Austria is obtained by matching income tax data files of the Ministry of Finance with Social Security data and the micro census; an exercise first undertaken at the end of the 1990s by Statistics Austria (*Rechnungshof*, 2002). These data files are not accessible to research, also not on an anonymous basis.

been analysed in detail by Statistics Austria (*Bauer – Reiselhuber, 2001, Bauer – Klotz, 2002*); a closer look at the data in this paper is well beyond the scope and objective of the research undertaking within EQUAL/ida. The ex ante expectation of the exclusion of income from self-employment in the micro census is a flattening of the income distribution as income of the latter group tends to be more polarised than wage and salary income including transfer payments. The results of the income and expenditure survey do not corroborate the ex ante expectation, however. The income disparities between households are not significantly higher in the case of total household disposable income compared to earnings resulting from wages, salaries and transfers.

The paper looks at overall trends in the earnings distribution, provides some insight into the composition of earnings in 1999, and tries to highlight some of the driving forces for change over time. The methodology employed follows the guidelines of the OECD (*Förster – Pearson, 2002, Förster, 2000, Oxley et al., 1997*), on the basis of which international comparisons are undertaken by the OECD (see methodological annex).

The income concept used is that of equivalent disposable income per individual (monthly average in Austrian Shillings at 1983 prices)⁵. The calculation of household incomes is based on individuals, whose income is added up to obtain disposable household income. The latter is adjusted for differences in household size by dividing disposable household income by the square-root of the number of persons in the household. Then, equivalent household income is attributed equally to all members of the household (adults and children are treated equally). The equivalence scale elasticity of 0.5 implies economies of scale in consumption within a household consisting of more than one person⁶. 1983 and 1993 are years of the same cyclical position, i.e., at the end of a recession, while 1999 is a year well into a strong economic upswing.

It should also be noted that the household survey of 1993 is not adequately capturing the change in the structure of population between 1989 and 1993. This period is characterised by unprecedented numbers of net-inflows of migrants. A large number of migrants were refugees from the former region of Yugoslavia who settled in Austria. The migrants tend to fill the ranks of inhabitants at the bottom end of the income scale. A new sample was drawn in 1994, taking account of the changed structure of the population. By 1999, the migrants have been more or less fully integrated, many of them have become naturalised. Both aspects, the

⁵ Current income is deflated by using the consumer price index (CPI) relative to 1983; i.e., income is expressed in AS, with 1983=100.

⁶ A value less than 1 implies that household welfare can be maintained with a less than proportionate increase in income as another household member is added. A value of 1 implies no economies of scale, a value of zero no rise in household needs as household size increases. There is no consensus on the correct elasticity. EUROSTAT adapted the OECD scale by differentiating the weights of additional members of household by age (children under 14 are given a weight of 0.3 and adults 0.5).

difference in the cyclical position and the structural adjustment of the sample survey may account for some of the rise in income inequality between 1993 and 1999.

Main trends in the distribution of household income

The measures of economic inequality fall broadly into two categories: objective measures of inequality, usually some statistical measure of relative variation of income, e.g., variance, coefficient of variation, the Gini coefficient of the Lorenz curve; and some normative notion of social welfare according to which a higher degree of inequality represents a lower level of social welfare. The calculation of objective inequality indicators is usually the first step of analysis, which may be followed by debates over ethical values and the question of the degree of inequality a society tolerates, or at what stage inequality jeopardises economic growth or social peace.

This paper aims at establishing an objective picture of income inequality in Austria as indicated by the database. Perhaps the simplest measure of inequality is a comparison of the two extreme values of income, i.e., the ratio of the mean income of the bottom and top decile (P90/P10). Accordingly, the ratio of the mean income of the 90% up from the bottom to the income of the 10% up from the bottom was 3.3 in 1999, and thus clearly higher than in 1993 and 1983 with 3 and 2.9 respectively. The most recent ratio corresponds to countries like France, Switzerland, Belgium and Japan; it is higher than in the Nordic countries and Netherlands (which range between 2.6 and 3) and clearly below Greece (4.8), Italy (4.6), UK (4.2) and Germany (3.6)⁷.

The difficulty with the range as an indicator of inequality is that it ignores the distribution between the extremes. In theory two distinctly different distributions may lie between the extremes, e.g., a polarised division of the population into rich and poor, or, alternatively, a clustering around the mean income. The implications for economic and social policy are quite different in the one or the other case. Therefore, it is necessary to take recourse to a measure of relative mean deviations, i.e., to compare the income level of each with the mean income; in addition one wants to capture the impact of a transfer of income between income levels on inequality by calculating the variance. The variance depends, however, on the mean income level. In order to give equal weight to transfers of income, independent of the income level, one has to calculate the coefficient of variation. In order to ensure the Pigou-Dalton condition (*Pigou*, 1912, p. 351, *Dalton*, 1920, p. 12), i.e., to make the inequality measure sensitive to transfers from the rich to the poor, the coefficient of variation is squared (SCV = Squared coefficient of variation). The SCV index is the sum of the squared deviations

⁷ The international data stems from Förster 2003, which provides information on the most recent surveys of the respective countries, i.e., around the year 2000.

of income of each individual from that of the population mean, divided by the square of mean income. The SCV index is sensitive to changes at the top end of the income scale.

If one wishes to attach greater importance to income transfers at the lower end of the income distribution, one has to transform income data, e.g., by taking the logarithms. The MLD (mean log deviation) index is such an indicator. It is the average of the log ratios of the income of each individual to the mean income. The MLD has the property of highlighting differences at the lower end of the income scale and somehow squashes changes in the upper income ranges.

The SCV and MLD have the same lower bound value of zero, i.e., in the case of perfect equality, but different upper bound values. It is infinity for the SCV and $[1+\log(100)]\log(\text{mean income})$ for the MLD. In Austria, the value of the SCV index has continuously increased between 1983 and 1999, suggesting a widening of inequality of disposable household income over time. It rose in the decade after 1983 by 1.4 points and in the following 7 years by 1.2 (from a level of 19.9 in 1983 to 22.5 in 1999)⁸. The value of the MLD, in contrast, has declined, particularly between 1993 and 1999 (from 10.3 in 1983 to 10.1 1993 and 5.6 1999). This suggests that the deviation of income from the mean has diminished at the lower end while it has increased at the upper end of the income scale.

With an SCV index level of 22.5 in 1999, Austria's degree of inequality is similar to the Nordic countries, and lower than in Southern European and Anglo-Saxon countries. As to the MLD index level of 5.6 in 1999, after 10.1 in 1993, Austria is clearly at the lower end of inequality in the international arena, together with the Nordic countries. These indicators and their development over time suggest that disposable income of Austrian households clusters more around the mean than in most other countries in the EU. The development in the 1990s suggests that there has been a slight move away of the top income range from the mean, while lower income groups have experienced above average rises in real income, bringing them closer to the mean.

A measure which is widely used to represent the degree of inequality is the Gini coefficient (*Gini, 1936*). One way of visualising the Gini-coefficient is by using the analytical tool of the Lorenz Curve (*Lorenz, 1905*). By arranging the percentages of the population from the poorest to the richest on the x-axis and the cumulated percentages of household income on the y-axis, the 45° line represents a Lorenz curve, in which everyone enjoys the same income. If some people receive less income than their share in the population, the Lorenz curve is below the diagonal and its slope will increasingly rise as one moves up the income scale. The Gini coefficient is the ratio of the area between the diagonal and the Lorenz curve and the triangular region below the diagonal. It is a direct measure of income differences measuring absolute mean differences. It captures the income difference between every pair of incomes

⁸ The index levels of SCV and MLD are multiplied by 100.

in the population, avoiding the concentration on differences between the individual income level and the mean (relative mean differences).

In 1999, the Gini coefficient of the disposable income distribution of the entire population rose clearly versus 1993 to 25.2, while it had stagnated between 1993 (23.8) and 1983 (23.6). With a level of the Gini coefficient of 25.2 at the end of the 1990s, the Austrian income distribution corresponds to that of the Netherlands; only Sweden and Denmark have a lower degree of income inequality with 24.3 and 22.4 respectively. The Southern European countries have the highest inequalities of disposable household incomes in Europe (Italy: 34.7; Greece: 34.5) closely followed by the UK (32.6) and Ireland (32.4).

Income inequality has increased in the 1990s for the population of working age. All 3 indicators, i.e., the range between the top and bottom deciles, the Gini coefficient and the squared coefficient of variation have increased. In contrast, the distribution of disposable income of the retirement age population has flattened between 1993 and 1999. The development of the mean log deviation (MLD) is not easily interpreted. It suggests that there have been transfers of income among the income groups below the mean income level from the better off to the poorer ones (Table 1).

Another point to be raised is to what extent real median disposable household income per capita has risen over time. As can be seen from Table 1, real median income per capita of the entire population has risen by some 30% between 1983 and 1993 (from AS 9,300 to 12,200), while stagnating between 1993 and 1999 (AS 11,800). The median of real disposable household income of the retirement age population increased more than proportionately compared to the median real household income of the population of working age. Between 1983 and 1993 it rose from AS 7,100 to 10,200 (+45%) and increased only slightly between 1993 and 1999 to AS 10,500 (+2%). In contrast, real median disposable income per capita of the 18-65 year old population increased by 26% between 1983 and 1993 (from AS 10,400 to 13,100), while declining by 3% between 1993 and 1999 to AS 12,700.

Table 1: Evolution of income inequality over time (equivalence elasticity=0.5)

Components of disposable income by income group

The distribution of net earnings (after tax and including transfer payments) across three income groups: the bottom three deciles ("lower incomes"), the four middle deciles ("middle incomes"), and the top three deciles ("higher incomes") has widened somewhat in the last 17 years. The share of lower income groups in the population of working age has declined over time, particularly in the 1990s, from 16.9% in 1983 to 15.6% in 1999. The share of the middle income groups has declined in the decade between 1983 and 1993 and increased again in the later 1990s to about the same level as 1983, namely 38.1% (after 37.9% 1993). The share of the higher income groups in total disposable earnings has increased continuously since the

early 1980s, from originally 44.9% to 46.3% in 1999. This change in the earnings distribution is basically the result of the widening of the span of market income after taxes.

In contrast, the distribution of transfer payments (the sum of social security transfers including retirement benefits from public sources, unemployment benefits, child & family allowances from public sources, all income-tested and means-tested benefits) has changed significantly in favour of low income groups in the working age population, thus effectively redistributing income from the better off to the worse off. While, in 1983, only 24.5% of all social transfer payments accrued to the bottom 30% of all income groups, their share rose to 30.6% in 1999 (after only a slight increase of 2.3 percentage points between 1983 and 1993). The proportion of transfer payments going to middle income groups has remained fairly stable in the long run (1999: 41.6%), while the share of transfer payments going to the upper income groups has declined substantially from 34.3% in 1983 to 27.8% in 1999.

In the case of the retirement age population (over 65) at the end of the 1990s, the distribution of disposable income per capita across the three major income groups does not differ much from that of the working age population. This has not always been the case. In 1983, a larger proportion of retirement age persons was in the bottom 30% income group (19.4%) than in the working age group (16.9%). It was above all in the 1990s, that the retirement age population experienced a shift in the income distribution towards higher income groups. Occupational pensions as well as transfer payments raised above all the disposable income of older people in the top 30% of the income groups at the expense of lower and middle income groups (Table 2).

Table 2: Cumulative shares of income components by decile (equivalence elasticity=0.5)

Transfer payments are an important source of disposable income for the low income groups. The significance of transfer payments in terms of their share in disposable income, declines as the level of disposable income rises. In 1999, 24% of disposable income of the low income groups (bottom 30%) of the working age population were transfer payments - about half were pensions and the other half child/family benefits and unemployment benefits. In contrast, the top 30% get only 7% of their disposable income from transfer payments, in the main pensions. On average, 11.5% of the disposable income of the working age population were transfer payments, somewhat less than in 1983 (12.4%) and 1993 (12.1%).

Of course, transfer payments are the major source of income of the retirement age population. In 1999, 63% of total disposable income were transfer payments. This is a somewhat smaller proportion on average than in 1993 (77.4%) and 1983 (79.3%). In the case of lower income groups, more than 80% of the disposable income per capita is a transfer payment; in contrast, the highest income groups depend only for some two thirds on transfer payments; the other major source of income is from capital, in the main in the form of occupational pensions and private transfers (Table 3).

Table 3: Average income structure by decile (equivalence elasticity=0.5)

In 1999, on average about 33% of disposable income of the entire population were the result of a transfer payment, somewhat less than in 1983 and 1993 (38% in both years). In the low income groups (bottom 3 income deciles), between 50% and 57% of disposable income are the result of transfers while transfers make up only 23% of disposable income of the top 3 income deciles. Old age pensions are the major source of income in the low income groups – about 20% of the income in the bottom 3 deciles. But also family cash benefits and unemployment benefits make up a large segment of income of low income persons. This goes to show that low income groups are to a large extent either old age pensioners or persons with dependent children or unemployed (Table 6).

Table 6bis: Percentage shares of type of transfers in disposable income of each decile (equivalence elasticity = 0.5)

Winners and losers of relative income changes in the 1990s

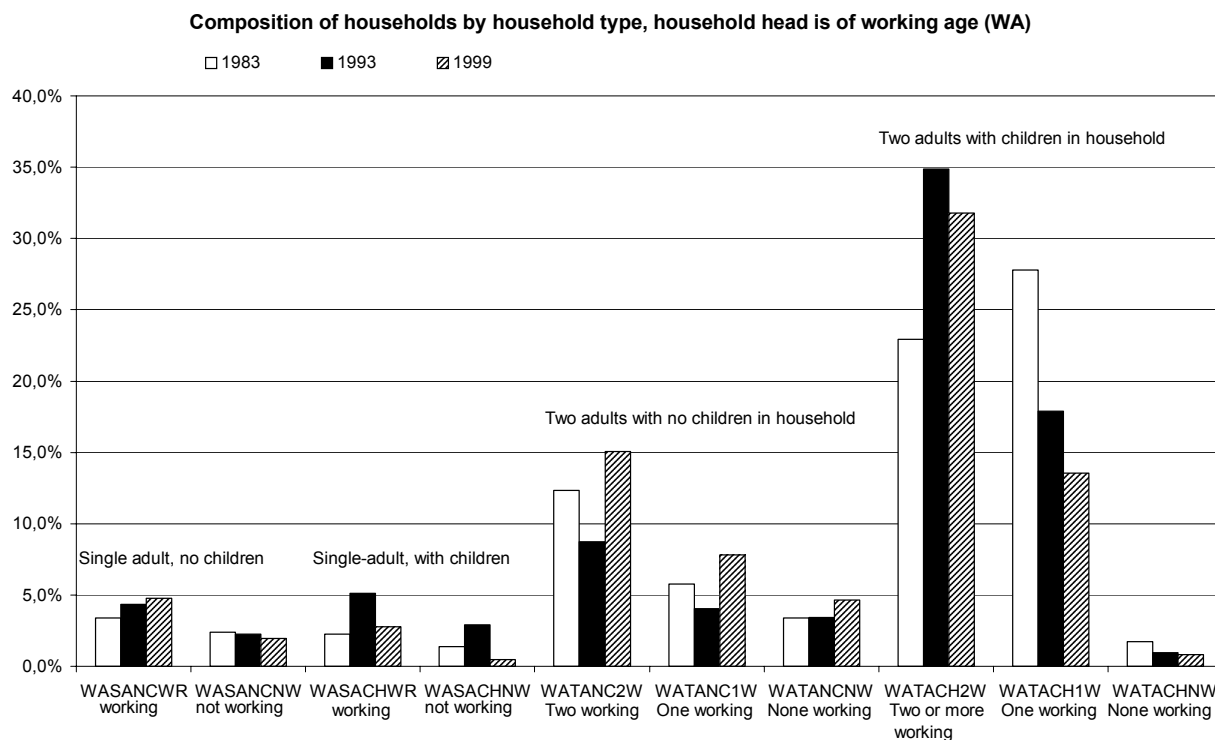
Changes in the composition of the population by income and household type

Before examining the changes in the relative per capita income position of persons living in the various household types, we look at the changes in the composition of the population by family/household type. We concentrate first on the number of individuals living in households, which are headed by a person of working age (below 65). In 1999, 83.7% of all individuals in Austria were living in a household in which the household head was below 65, not much different from the situation in 1983 (83.4%) and 1993 (84.5%). The composition of household types within this category has undergone significant change over time, however. The largest number of people is living in households with two adults and children; but the proportion of the population living in this household type has declined significantly since 1993. In 1999 only 46.2% of all individuals were living in a household with two adults and children compared to some 53% in 1993 (and about the same share in 1983). Within that group only a very small proportion of individuals is living in a household with nobody working, only some 1%.

The largest number of individuals is living in a household with two or more working; their share has increased from 22.9% in 1983 to 34.9% 1993 and 31.8% 1999. The single earner two adult household with children is becoming less frequent; in 1983 27.8% of all individuals were living in a one earner household with another adult and children, compared to 13.5% in 1999.

Second in line as to household types are two adult households with no children. This household type is becoming more prominent over time, independent of the degree of integration of the household members into gainful employment. Also the share of employed singles is increasing, as well as the share of single adult with children (Graph 1).

Graph 1: Household structure with a head below 65



Real per capita equivalence income is highest in the household type of two adults, both working, with no children followed by a single adult, working, with no children. Access to employment seems to be a guarantee for a high and rising per capita income, unless one is a single earner with children. In the 1990s, it was the group of single adults with children which experienced the harshest drop in disposable per capita income of any household type under examination (Graph 2).

Changes in the structure of the population by employment status of households go a long way in explaining changes in income distribution. The rising number of double income earners for example, contributes to the widening of the income distribution. On the other hand, there are also significant changes in earning power within groups. E.g., per capita disposable income of the single working adult with no children has increased significantly and consistently since the early 1980s, thus contributing to a widening of the income spectrum. In contrast, the income of single adults with children has declined in the 1990s, for working and non-working singles; this may be a result of increasing part-time work of single parents. The per capita income of two earner households with children has also declined since the early 1990s, maybe due to rising part-time work of the partner. In any case, this between group and within group changes all affect the per capita distribution of disposable income.

The largest proportion of low income persons (with household head of working age), are either single parents with or without work or two adult households with children, where nobody has a job, but also single jobless adults without children. In 1999, between 60% and 96% of members of these household types were in the bottom 30% income groups. Between 1983 and 1993, the relative per capita income situation has deteriorated for single parents and jobless parents with children. Single parents in the low income groups are to a large extent either amongst the working poor or almost totally dependent on transfer payments (Table 7).

Graph 2: Real monthly disposable income of individuals by household type in AS (1983=100)

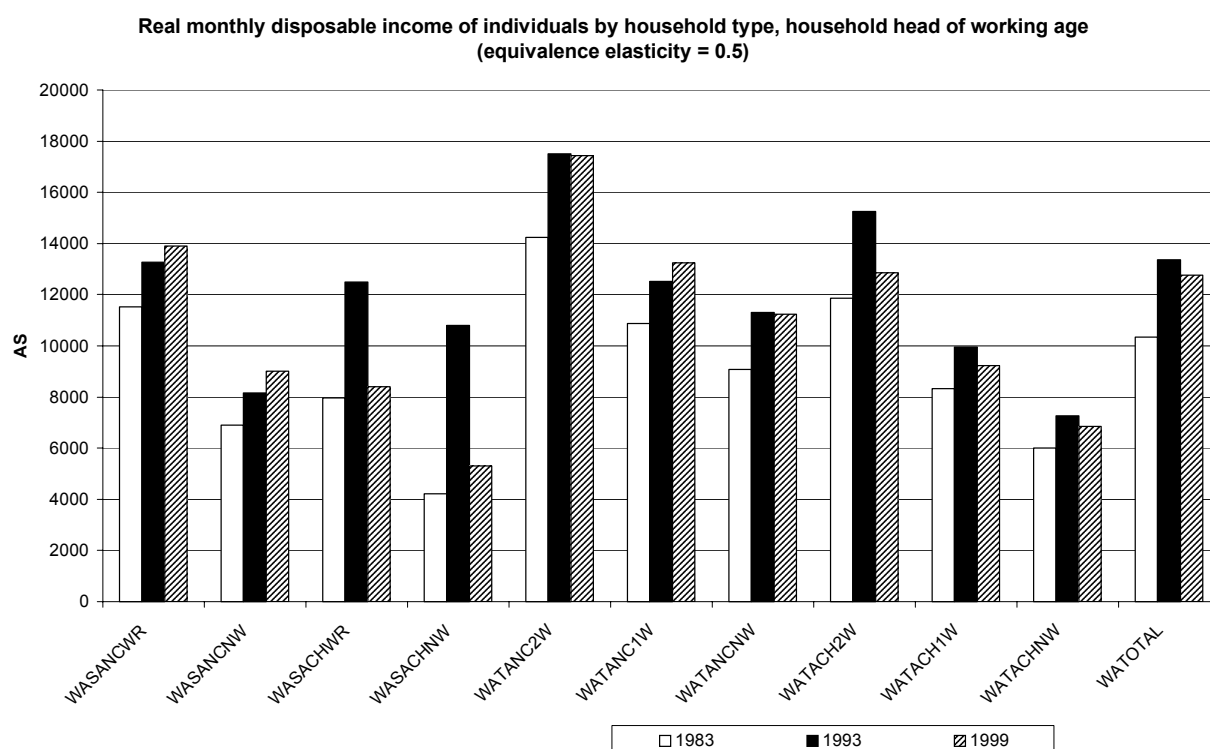


Table 7: Household structure and inequality (equivalence elasticity=0.5)

Table 7 provides the per capita disposable income distribution by household type. One may calculate an MLD index for every one of the 10 household types with working age head. This indicator provides insight into the inequality of income within these groups. Accordingly, inequality is most pronounced in the single jobless adult household with children (5.0) followed by two earner households with children (4.9) and single earner/two adult households without children (4.8). Inequality is least pronounced in one earner/two adult households with children and jobless households consisting of two adults with children (Table 8).

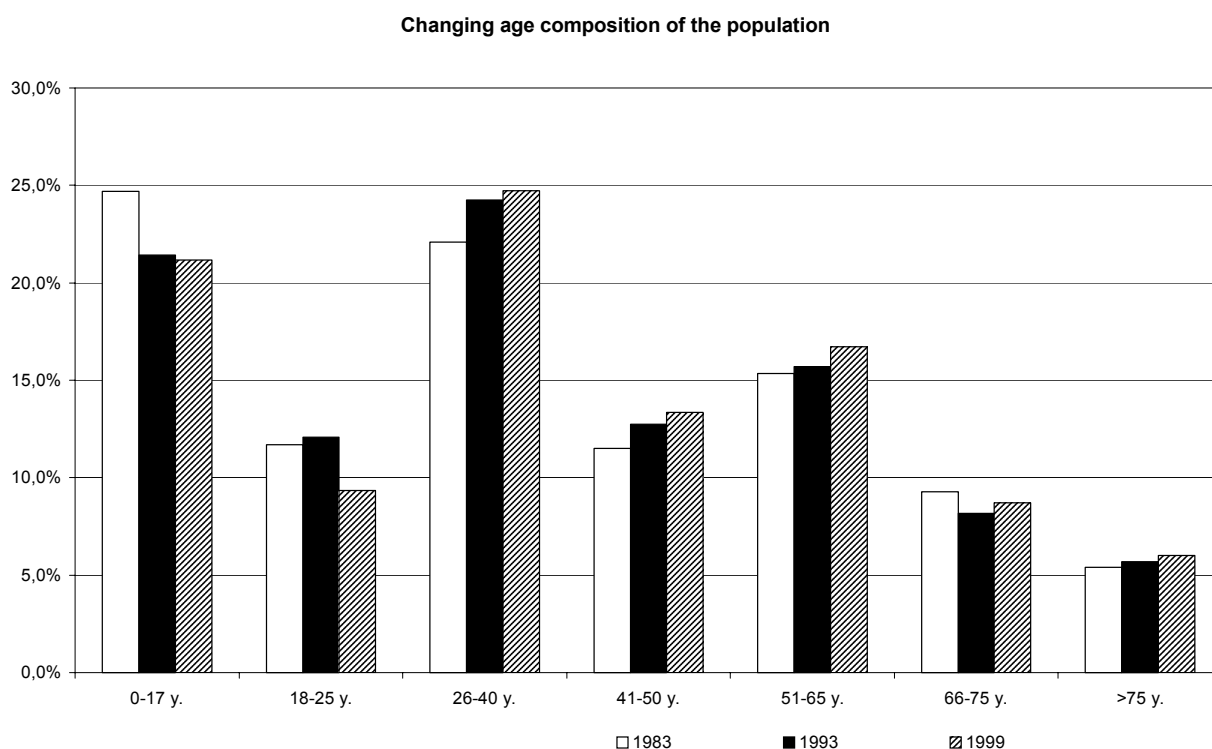
Table 8: Decomposition of income inequality by sub-groups of the population (equivalence elasticity=0.5)

Real disposable income per capita of persons living in households with a head above 65 (retirement age head) has increased by 37% between 1983 and 1993 and stagnated between 1993 and 1999. Income inequality is most pronounced in the case of two adults/one working (5.3), followed by two adults/two working (4.9) and single non working adults (4.8).

Changes in the composition of the population by income and age category

The change in income distribution is not only affected by changing behavioural patterns which result in the formation of so-called non-traditional household types, but also by the changing age composition of the population and changes in earning power of the various age groups. Earnings tend to rise with experience and age up to a point in time when people start to retire from working life. Thus, the rising share of middle aged and older persons of working age between 1983 and 1999 suggests, ceteris paribus, a widening of the earnings distribution over that time span. However, earnings within age groups may change over time as well, thus leaving the outcome in terms of income inequality open.

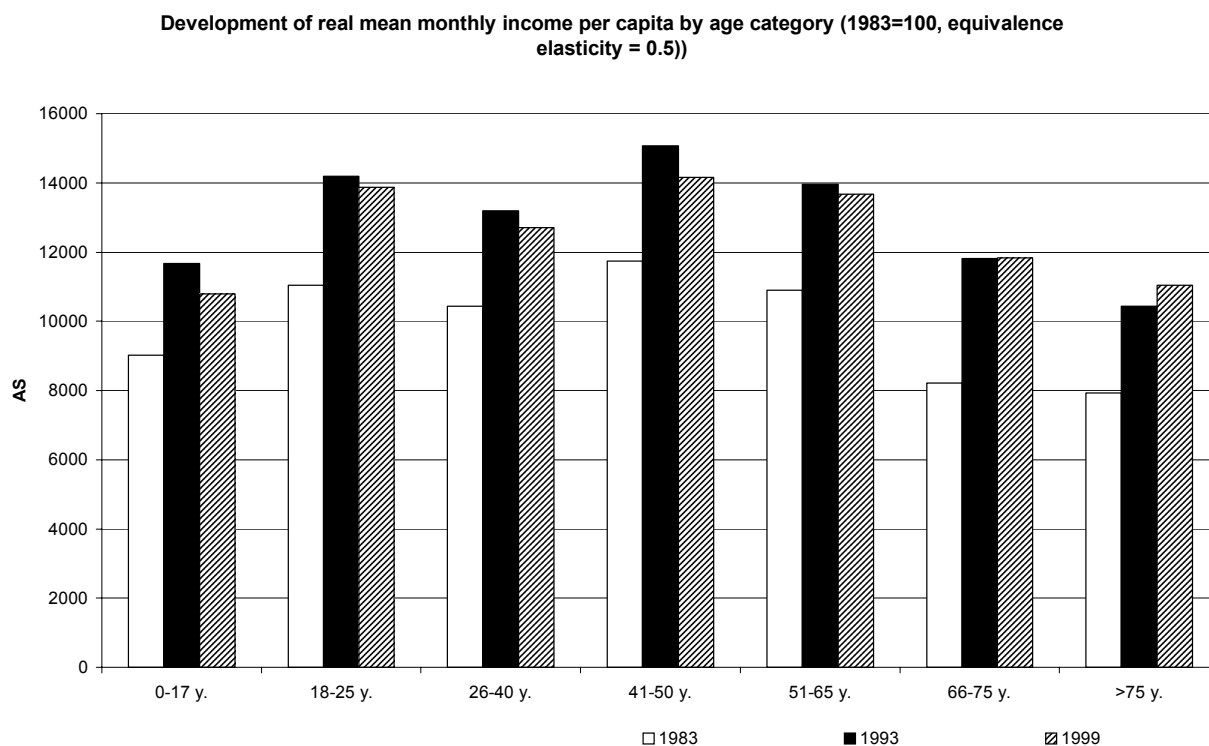
Graph 3: Changing age composition of the population



The proportion of children under 17 and young adults (18-25 year olds) has declined between 1983 and 1999 (from 24.7% to 21.2% and from 11.7% to 9.3% respectively) and the proportion of adults in every major age group has increased (Graph 3).

Table 9: Distribution of household disposable income by age category

Graph 4: Real per capita disposable income by age category



Per capita income of children as well as over 65 year olds tends to be lower than the average for the population and above average for persons of prime working age. In that context one has to clarify that per capita income of children refers to the income of households with children - equivalent incomes are assigned to the household members including children. Accordingly, persons living in households with children under 17 tend to have on average lower incomes than middle aged people. In 1983 real monthly per capita income was 10.2% lower than the population average, and the difference increased to - 14.3% in 1999. Older persons also have below average per capita disposable income. In 1999 persons older than 75 had 12.2% lower per capita incomes than the population average and 66-75 year olds 6.1% lower incomes. It was older persons who experienced a pronounced improvement of their real disposable income between the early 1980s and the end of the 1990s, particularly 66-75 year olds. Their income used to be 18% respectively 21% below the population average.

The highest income earners are individuals aged 41 to 50. Their per capita income surpassed the population average by 12.5% in 1999 (in 1983 the difference was even +17%). The high average per capita disposable income of persons aged 41-50 is in the main the result of the high proportion of persons in the highest income group. In 1999, 42% of the 41-50 year olds were in the top 30% income group in contrast to 17.9% of the case of under 17 year olds.

Table 9 and Graph 4 show that every age group except older persons (above 65) experienced a decline in real income per capita between 1993 and 1999. It was basically only older persons who could improve their relative income position in the 1990s. They tended to move from the bottom income deciles to the middle income groups. In contrast, younger age groups tended to be the losers in their relative income position.

Evolution of poverty

The term poverty has descriptive-analytical as well as normative aspects. On the one hand factors which determine the standard of living, e.g., income, wealth, resources, access to goods and services, have to be taken into account, on the other norms or standards have to be defined which determine under what conditions a person may be considered to live in poverty. We argue, following the ILO (ILO, 1976) that poverty is given in situations where a person may not participate fully in social, cultural and political life and has difficulties satisfying basic economic needs as a result of insufficient economic means.

This paper looks at poverty only in terms of cash income as the sole dimension of poverty, without considering the role of benefits in kind or wealth to alleviate deprivation. The poverty rate is generally defined in relative terms, i.e., as the proportion of individuals falling below 60% (or 50% or 40%) of median equivalent household disposable income. Thus, the poverty threshold is relative to the median income.

In Austria, the share of individuals (head count) with incomes below 60% of the median has increased steadily from 11.4% in 1983 to 13.7% 1993 and 15.6% 1999. Also the proportion of individuals falling below 50% of the median income has increased over time: from 6.1% to 7.4 and 9.3%. The degree of inequality of incomes of the poor as measured by the Gini coefficient is fairly small but increases when lowering the poverty line from 60% of median income (16.6) to 30% of median income (18.4) (Table 10).

An additional indicator may be calculated which measures the intensity of poverty, the income or poverty gap ratio (I). This ratio informs about the average shortfall of the income of the poor relative to the poverty line. In Austria, the average shortfall of the poor in terms of the 60% poverty line was 28% in 1999. If we take the 50% poverty line, the income gap decreased between 1983 and 1993 from 27.6% to 20.7%, but increased again, in line with the head count, between 1993 and 1999 to 30%. This is to say that the average disposable income of the poor fell by 30% below the poverty line.

If one wants to take the development of real income into account, one may calculate an 'absolute' poverty rate by relating real income to a constant threshold, i.e., the median income of 1983. According to this indicator, poverty increased in Austria between 1993 and 1999 from 4.7% to 8.4% (60% poverty line) since real median income declined somewhat. Only if we fix the poverty line at a level of 30% of the median income of 1983 does the poverty rate decline between 1993 and 1999 (from 2.3 to 1.7% of the entire population).

Table 10: Evolution of "absolute" and relative poverty

The poverty rate differs by household structure and work attachment of the household members. In the household category with household head of working age the poverty rate (at a 50% poverty line) is most pronounced in the jobless single parent case. In this household type 67.6% of all individuals were living under the poverty line in 1999 (WASACHNW in Table 11). Second in line as to poverty are jobless two adult households with children (35.6% of all individuals in this category), followed by working single parents (23.2%) and single jobless without children (21.9% of all individuals in this category are below the poverty line).

These are much higher poverty rates than for any category of retirement age persons.

Table 11: Poverty rates before and after taxes and transfers by household type

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Methodological Annex

This annex reproduces the "terms of reference" of the OECD

Definitions

The unit of observation of the survey is the household. A household is defined as a collection of individuals who are sharing the same housing unit. In the distribution, *each household is weighted by the number of individuals who belong to this household*. For instance, a household of four people has a weight equal to four; this is equivalent to considering a distribution in which this household is represented by four individuals with the same level of income.

Individuals are ranked according with the value of the "adjusted" real disposable income per equivalent household member of the household to which they belong. For instance, if Y_i denotes the total disposable income of household i , the "adjusted" income of each member j of household i (W_{ij}) is calculated as following :

$$[1] \quad W_{ij} = \frac{Y_i}{S_i^\varepsilon}$$

where S_i is the number of members in household i and ε is the equivalence elasticity.

All incomes, taxes and benefits are reported on an *annual basis*. The total household income (Y_i) is defined as the total disposable income; it includes self-employment incomes, realised property incomes, cash transfers from the general government less taxes and social security contributions. Current income is deflated by using the CPI deflator relative to the initial year (all incomes are expressed in national currencies of the initial year).

Equivalence scales

The equivalence elasticity (ε) characterises the amount of scale economies that households can achieve. In the absence of scale economies ($\varepsilon=1$), the "adjusted" income of each household member is expressed as the total household disposable income per capita

$$W_{ij} = \left(\frac{Y_i}{S_i} \right)$$

. In this case, the sum over j of individual incomes W_{ij} is strictly equal to the total household disposable income. An equivalence elasticity lower than unity implies the existence of economies of scale in household needs: any additional household member needs a less than proportionate increase of the household income in order to maintain a

given level of welfare. Under this assumption, the sum over j of individual "adjusted" incomes W_{ij} exceed the total household disposable income by the amount of scale economies.

All following tables specified in this request should be calculated under two alternative equivalence elasticity values :

- 1) no economies of scale ($\epsilon=1$).
- 2) economies of scale ($\epsilon=0,5$).

Income sources

The following income sources are identified :

- 1) the salary income of the household head (excluding employers' contributions to social security, including sick pay paid by governments) (EH).
- 2) the salary income of the household spouse (excluding employers' contributions to social security, including sick pay paid by governments) (ES).
- 3) the total salary income from other household members (excluding employers' contributions to social security, including sick pay paid by governments) (EO).
- 4) capital incomes, including occupational pensions and all kinds of private transfers (K).
- 5) self-employment incomes (SE).
- 6) social security transfers, including accident and disability benefits, social retirement benefits (from public sources), unemployment benefits, maternity allowances, child and/or family allowances (from public sources), all income-tested and means-tested benefits (TR)
- 7) direct taxes and social security contributions (TA).

While this desegregation of income sources is used for most of the tables, Table 6 ask for a more detailed disaggregation of public transfers into types of benefits.

To the possible extent, definitions used in calculating these income sources should be close to that adopted in Atkinson, Rainwater and Smeeding, "Income distribution in OECD Countries: Evidence from the Luxembourg Income Study", OECD, 1995, p.14. (attached)

Individual disposable income per equivalent household member can then be expressed as follows :

$$[2] \quad W_{ij} = EH_{ij} + ES_{ij} + EO_{ij} + K_{ij} + SE_{ij} + TR_{ij} - TA_{ij}$$

In addition, we define the individual market income per equivalent household member as :

$$[3] \quad M_{ij} = EH_{ij} + ES_{ij} + EO_{ij} + K_{ij} + SE_{ij}$$

In both [2] and [3], all income components are expressed in terms of equivalent household member. For instance, EH_{ij} is calculated by dividing the earning of the head by the number of household member S_j to the power of the equivalence elasticity (ϵ) - just like in [1] - and then allocated to each household member.

Bottom coding

[1] General treatment: Once equivalent household member adjustments are done, using the equivalence elasticity under consideration (see section 3), all individual components of market income (EH, ES, EO, K, SE) showing negative values should be set to zero. For instance, any negative value of self-employment income is set equal to zero.

Then, market and disposable incomes are calculated using formulas [2] and [3]. The ranking of individuals is done on the basis of these new values of disposable income. All tables requested will be built using the same ranking (e.g., distribution held constant), even when considering specific household groups.

The mean of market income and disposable income are then computed (over all incomes e.g., zero and non-zero incomes)

[2] When computing the MLD, the log properties require *strictly positive income values* (see formula [4]).

Any values of disposable income W_{ij} lower than 1 per cent of the mean disposable income is set equal to 1 per cent of the mean disposable income. The "bottom coded" value of disposable income per equivalent household member is denoted by W_{ij}^* (see Table 1 and Table 5).

Any value of *market income* M_{ij} lower than 1 per cent of the mean market income is set equal to 1 per cent of the mean market income. The "bottom coded" value of market income per equivalent household member is denoted by M_{ij}^* (see Table 5).

As a result, taking into account the adjustments described above, mean income has to be re-calculated before computing the MLD.

Time coverage

Income distributions refer to a particular year. Trends of income distribution are analysed by comparing static distributions at three points in time. To the possible extent, years should be selected such as to correspond to similar phases of the business cycle.

Aggregate trends in income distributions

Table 1 aims at describing the evolution of income inequality over the last two decades by using deciles ratios and aggregate indicators of inequality. Individuals are ranked according with their *household total disposable income per equivalent household member* as described in equation [1]. Separate panels refer to the entire population, to the population of working age (18 to 65) and of retirement age (over 65): each panel has the following format.

Table 1: Evolution of income inequality through time

Entire population

	Mid 1970		Mid 1980		Most recent	
total number of individuals						
total number of households						
	upper bound value ⁽¹⁾	real mean income	upper bound value ⁽¹⁾	real mean income	upper bound value ⁽¹⁾	real mean income
decile 1						
.....						
decile 10						
TOTAL	(3)		(3)		(3)	
Real median income :						
MLD ⁽²⁾						
SCV						
Gini						

(1) the upper bound value is the value of the real income at the upper breaking point of the corresponding decile. Therefore, the upper bound value of decile 1 corresponds to the income of the 10 per cent up from the bottom individual (referred to as D1 value); that of decile 9, to the income of the 90 per cent up from the bottom individual (referred to as the D9 value) and that of decile 10, to the highest (possibly top coded) income value.

(2) MLD calculations are based on "bottom coded" values W_{ij}^* (see the section about bottom coding).

(3) shaded cells are empty.

- The MLD (Mean Log Deviation) index is calculated as :

$$[4] \quad MLD = \frac{\sum_i \sum_j \log\left(\frac{\mu}{W_{ij}^*}\right)}{n}$$

where log is the natural logarithm, μ is the arithmetic mean of disposable incomes

$$\mu = \frac{\sum_i \sum_j W_{ij}}{n}; \text{ and } n \text{ is the total number of individuals.}$$

- The SCV (Squared Coefficient of Variation) index is calculated as :

$$[5] \quad SCV = \frac{\text{var}(W_{ij})}{\mu^2} = \frac{\frac{1}{n} \sum_i \sum_j (W_{ij} - \mu)^2}{\mu^2}$$

- The Gini index is calculated as :

$$[6] \quad Gini = \left(\frac{2}{\mu \cdot n^2} \cdot \sum_{k=1}^n k \cdot W_k \right) - \frac{n+1}{n} = \frac{2 \text{cov}\left(W_k, \frac{k}{n}\right)}{\mu}$$

$$= \frac{\frac{2}{n} \sum_{k=1}^n (W_k - \mu) \cdot \left(\frac{k}{n} - \frac{1}{n^2} \sum_{k=1}^n k \right)}{\mu}$$

where household incomes per equivalent household members ($W_{ij} = W_k$) are ranked in ascending order (such as $k = 1, 2, \dots, n$).

Income distribution by income sources

This section analyses how various income sources affect the distribution of households' disposable income and how the structure of disposable incomes varies across deciles. This is complemented by a decomposition of the SCV by income sources. The income sources considered are those specified in identity [2] above.

The following set of tables indicates the distribution across deciles of the different income sources. Separate panels refer to the entire population, to the population of working age and of retirement age. Individual observations are ranked *following ascending values of household disposable income per equivalent household member* (W_{ij}), just as in Table 1. Each of the panels has the following format.

Table 2: Cumulative shares of income components by decile

Entire population

	EH	ES	EO	K	SE	TR	TA	EH+ES+E S+K+ SE+TR-TA
<u>Mid 1970</u>								
dec.1								
dec.2.								
dec 10	100%	100%	100%	100%	100%	100%	100%	100%
<u>Mid 1980</u>								
dec.1								
...								
dec 10	100%	100%	100%	100%	100%	100%	100%	100%
<u>Most Recent</u>								
dec.1								
...								
dec 10	100%	100%	100%	100%	100%	100%	100%	100%

As an example, the shaded cell contains the cumulative share of transfers received by households/individuals of decile 1 and 2 as a percentage of total transfers (given that households/individuals are ranked by ascending values of disposable income per equivalent household member).

The next table provide information on the structure of disposable income for units in each decile. The three panels refer to the entire population, an to the population of working age and retirement age. The format of each is as follows:

Table 3: Average income structure by decile

Entire population

	% shares of income sources in each decile							TOTAL
	EH ⁽¹⁾	ES ⁽¹⁾	EO ⁽¹⁾	K ⁽¹⁾	SE ⁽¹⁾	TR ⁽¹⁾	-TA(1)	
<u>Mid 1970</u>								
dec.1								100%
...								100%
dec 10								100%
Total								100%
<u>Mid 1980</u>								
dec.1								
...								
dec 10								
Total								
<u>Most Recent</u>								
dec.1								
dec.2								
...								
dec 10								
Total								

(1) All shares are expressed relative to disposable income

As an example, the shaded cell contains the average share of the earnings of spouses for units in the second decile (as a percentage of *disposable* income of all units in decile 2, having ranked units by ascending values of disposable income per equivalent household member).

NOTE: Table 1, 2 and 3 should be consistent.

Table 4 shows three aggregate inequality indicators at the level of market income (e.g., before taxes and transfers) and of net income (e.g., after taxes and transfers). These indicators are calculated at the level of both units with "non-zero" income, and of all units, and shown separately for the entire population, and for the population of working age and retirement age.

Table 4: Aggregate inequality indicators before and after taxes and transfers

	Mid 1970s		Mid 1980s		Most recent	
	Before taxes and transfers (EH+ES+EO+K+SE)	After taxes and transfers (EH+ES+EO+K+S E+TR-TA)	Before taxes and transfers (EH+ES+EO+K+S E)	After taxes and transfers (EH+ES+ES+K+SE+TR-TA)	Before taxes and transfers (EH+ES+EO+K+S E)	After taxes and transfers (EH+ES+ES+K + SE+TR-TA)
% of individuals with zero incomes over the working-age pop.						
% of individuals with zero incomes over the retirement age pop.						
% of individuals with zero incomes over the entire pop.						
ratio D9/D1 for non-zero incomes ⁽¹⁾						
MLD⁽³⁾:						
- non-zero incomes only over the working-age ⁽²⁾ pop.						
- all incomes over the working-age ⁽²⁾ pop.						
- non-zero incomes only over the retirement-age ⁽²⁾ pop.						
- all incomes over the retirement-age ⁽²⁾ pop.						
- non-zero incomes over the entire pop.						
- all incomes over the entire pop.						
SCV:						
- non-zero incomes only over the working-age ⁽²⁾ pop.						
- all incomes over the working-age ⁽²⁾ pop.						
- non-zero incomes only over the retirement-age ⁽²⁾ pop.						
- all incomes over the retirement-age ⁽²⁾ pop.						
- non-zero incomes over the entire pop.						
- all incomes over the entire pop.						
Gini:						
- non-zero incomes only over the working-age ⁽²⁾ pop.						
- all incomes over the working-age ⁽²⁾ pop.						
- non-zero incomes only over the retirement-age ⁽²⁾ pop.						
- all incomes over the retirement-age ⁽²⁾ pop.						
- non-zero incomes over the entire pop.						
- all incomes over the entire pop.						

(1) non-zero observations are ranked into deciles and the ratio of D9 to D1 income values is calculated (see the footnote (1) of Table 1).

(2) 18 to 65 years old.

(3) MLD calculations are based on "bottom coded" values M_{ij}^* and W_{ij}^* (see the section about bottom coding).

SCV decomposition by income source

Table 5 decomposes an aggregate index of inequality (the SCV) into components specific to each income source and interaction terms. Assuming m income components, it can be demonstrated⁹ that :

⁹ See Shorrocks A., "Inequality decomposition by factor components", *Econometrica*, Vol. 50, No. 1, January 1982, p. 195 and p. 216.

$$[8] \quad SCV = \sum_k \frac{\text{covar}(Y_k, Y)}{\mu^2} = \sum_k \frac{1}{2} \left[\frac{\text{var}(Y_k)}{\mu^2} + \frac{\text{var}(Y_k) + 2\text{covar}(Y_k, Y - Y_k)}{\mu^2} \right]$$

where Y_k is the k th. component of total income Y and μ is the mean total income.

Equation [8] states that the total SCV is additively decomposable into the contribution of each component k measured as the covariance between component k (Y_k) and the total income (Y) divided by the squared mean of the total income. Each contribution can in turn be decomposed into:

- its own "pure" inequality measured by the variance of component k divided by the squared mean (first term inside the bracket). This corresponds to the inequality specific to component k , that is the inequality which would be observed if all others income sources were equally distributed.

- the contribution of component k assuming that all interaction effects which involve component k are allocated to component k . This is measured by the second term inside the bracket which is the sum of the variance of component k and of twice the covariance between component k and the sum of all other components, except k .

For each of the 7 components defined in the identity [2], one need to calculate the following indicators :

1) the total contribution of the component (TOTC), calculated as the covariance between the income component and the total household disposable income (both expressed per equivalent household members) divided by the square of the average disposable income. For instance, the total contribution of the earnings of the household head TOTC(HE) is calculated as follows :

$$[9] \quad \text{TOTC}(HE) = \frac{\text{covar}(EH_{ij}, W_{ij})}{\mu^2} = \frac{\frac{1}{n} \sum_i \sum_j (EH_{ij} - \overline{EH})(W_{ij} - \mu)}{\mu^2}$$

where \overline{EH} is the average earning of the household head (per equivalent household member) and μ , the overall mean disposable income (per equivalent household member).

2) the "pure" inequality of each component (VAR), calculated as the variance of each component divided by the squared overall mean. Therefore, the inequality specific to the distribution of heads earnings (VAR(HE)) is calculated as follows :

$$[10] \quad \text{VAR}(HE) = \frac{\text{var}(EH_{ij})}{\mu^2} = \frac{\frac{1}{n} \sum_i \sum_j (EH_{ij} - \overline{EH})^2}{\mu^2}$$

3) the interaction effect (INT), based on twice the covariance between each component and the hypothetical value of the total disposable income where the component has been replaced by its mean. For instance, the interaction effect of heads earnings is obtained from recalculating all disposable incomes by setting heads earnings equal to the mean heads earning $(W_{ij} - HE_{ij} + \overline{HE})$, then by calculating twice the value of the covariance between heads earnings and this hypothetical disposable income divided by the squared mean disposable income :

$$\begin{aligned}
 [11] \quad INT(HE) &= \frac{2\text{covar}(HE_{ij}, W_{ij} - HE_{ij} + \overline{HE})}{\mu^2} \\
 &= \frac{\frac{2}{n} \sum_i \sum_j (HE_{ij} - \overline{HE}) ((W_{ij} - HE_{ij} + \overline{HE}) - \overline{W - HE})}{\mu^2}
 \end{aligned}$$

where \overline{HE} is the mean heads earning and $\overline{W - HE}$ is the mean of the hypothetical disposable income where heads earnings are replaced by their mean, thus

$$\overline{W - HE} = \left(\frac{\sum_i \sum_j W_{ij} - HE_{ij} + \overline{HE}}{n} \right)$$

According with [8], the decomposition has to satisfy the following identity :

$$[12] \quad TOTC(HE) = \frac{2VAR(HE) + INT(HE)}{2}$$

Table 5 is constructed on the basis of specifications [8] to [12]. The three panels refer to the entire population, to the population of working- and retirement age. Each has the following format.

Table 5: Decomposition of income inequality by income sources

Entire population

	EH	ES	EO	K	SE	TR	-TA	Total
<u>Mid 1970</u>								
VAR								
INT								
TOTCE								
<u>Mid 1980</u>								
VAR								
INT								
TOTCE								
<u>Most recent</u>								
VAR								
INT								
TOTCE								

NOTE: The sum of TOTCE across income components, shown in the last column should be the same as the SCV value in Table 1.

Additional detail on public transfers

In addition to the broad income sources reported above, we would be interested in obtaining additional information on the different types of public transfers. We are aware that the degree of dis-aggregation available will differ significantly across countries. At a minimum we hope to be able to distinguish between old-age cash benefits and other public transfers:

$$TR_{ij} = OAP_{ij} + OTH_{ij}.$$

Where possible, we would also like to distinguish between the following:

$$TR_{ij} = OAP_{ij} + DB_{ij} + OIDB_{ij} + SPI_{ij} + FCB_{ij} + UB_{ij} + HB_{ij} + OCB_{ij}, \text{ where}$$

- 1) OAP stands for old-age cash benefits;
- 2) DB for disability benefits;
- 3) OIDB for occupational injury and disease benefits;
- 4) SP for survivors benefits;
- 5) FCB for family cash benefits;
- 6) UB for unemployment benefits;
- 7) HB for housing benefits;
- 8) OCB for benefits on other contingencies.

The categorisation of public transfers follows that used in the OECD Social Expenditure Database (OECD, 1996, "Social Expenditure Statistics of OECD Member Countries).

Table 6: Cumulative shares of type of public transfer by decile

Cumulative shares (%) of total public transfers in each decile

Cumulative shares (%) of total public transfers in each decile									
	OAP	DB	OIDB	SP	FCB	UB	HB	OTH	TR
<u>Mid 1970</u>									
dec 1									
dec 2									
...									
dec 10	100%	100%	199%	100%	100%	100%	100%	100%	100%
<u>Mid 1980</u>									
dec. 1									
...									
dec 10	100%	100%	199%	100%	100%	100%	100%	100%	100%
<u>Most recent</u>									
dec. 1									
...									
dec 10	100%	100%	199%	100%	100%	100%	100%	100%	100%

As an example, the shaded cells contains the cumulative share of old age pensions received by households/individuals of decile 1 and 2 as a percentage of total old age transfers (given that households/individuals are ranked by ascending values of disposable income per equivalent household member).

Table 6bis: Percentage shares (%) of type of transfer in disposable income of each decile

	OAP	DB	OIDB	SP	FCB	UB	HB	OTH	TR
<u>Mid 1970</u>									
dec 1									
...									
dec 10									
<u>Mid 1980</u>									
dec. 1									
...									
dec. 10									
<u>Most recent</u>									
dec. 1									
...									
dec. 10									

(1) The share of total transfer in disposable income shown in the last column should equal that in Table 3; the share of all different types of public transfer should sum to the last column.

Income inequality for sub-groups of the population

The aim of this section is to analyse level and changes in the relative position of sub-groups of the population on the income ladder; the composition of their income structure; and how these sub-groups have contributed to the overall trends of income inequality.

Countries that were included to the first wave of the income distribution study should notice the changes in the definition of the households groups. Individuals are grouped in household categories depending *first* on the age of the household head (working age head, i.e., below 65; and retirement age, i.e., above 65); and *second*, within each of the two groups, according to the number of adults in the family and to the number of household member in employment (work attachment).

1) Households structure:

	WORKING AGE HEAD	RETIREMENT AGE HEAD
By number of adults in the household	Single adults (SA), two or more adults (TA)	Single adults (SA), two or more adults (TA)
By presence of children	With children (CH), no children (NC)	
By work attachment of household members	No worker (NW), worker (WR) one worker (1W), 2 or more workers (2W)	Zero worker (OW), one worker (1W), 2 or more workers (2W)

Households with a working age head are cross-classified according to each of the criteria, thus resulting in 18 groups:

- 1) WASANCWR working age head, single adult, no children, working
- 2) WASANCNW working age head, single adult, no children, non working
- 3) WASACHWR working age head, single adults, with children, working
- 4) WASACHNW working age head, single adults, with children, non working
- 5) WATANC2W working age head, two or more adults, no children, two or more working
- 6) WATANC1W working age head, two or more adults, no children, one working
- 7) WATANCNW working age head, two or more adults, no children, non working
- 8) WATACH2W working age head, two or more adults, children, two or more working
- 9) WATACH1W working age head, two or more adults, children, one worker
- 10) WATACHNW working age head, two or more adults, children, no workers

Household with a retirement age head are cross-classified by number of adults in the household and work attachment, resulting in 5 groups

- 11) RASAWR retirement age head, single adult, one worker
- 12) RA SANW retirement age head, single adult, no worker

- 13) RATA2W retirement age head, two or more adults, two or more workers
- 14) RATA1W retirement age head, two or more adults, one worker
- 15) RATANW retirement age head, two or more adults, no worker

An adult is any individual above 18 years old. A worker (W) is an adult with a non-zero annual earning or self-employment income. Therefore, for instance, an individual belongs to the WASACHNW group if he/she belongs to a household with a working age head, with a single adult in the household, with children and with zero workers.

Table 7 provides information for each of the above groups.

Table 7: Household structure and inequality

	Household with a working age head				Households with a retirement age head			
	WASANCWR	WATACHNW	Total (I)	RASAWR	...	RATANW	Total (II)
Mid 1970								
Group mean disposable income in real terms								
% individuals in each group								
[a] % of individuals in :								
decile 1 ⁽¹⁾								
...								
decile 10 ⁽¹⁾								
[b] TOTAL	100%	100%	100%		100%	100%	100%	
[c] % share of disposable income :								
EH+ES+EO								
K								
SE								
TR								
-TA								
[d] TOTAL	100%	100%	100%		100%	100%	100%	
Mid 1980								
Same as above								
Most recent								
Same as above								

(1) same ranking as in Table 1.

(2) 10 categories.

NOTE:

[a] This panel refers to individuals across deciles, for each household type.

[b] Please check that columns sum to 100% (use SUM formula).

[c] As in Table 3, shares should be expressed relative to disposable income , e.g., after taxes.

[d] Please check that the sum of shares equal 100 (use the SUM formula).

MLD decomposition by sub-groups of the population

Table 8 allows the identification of the contribution of each sub-group to total inequality, as measured by the MLD index (calculated by using "bottom coded" values W_{ij}^*).

The MLD decomposition is based on the methodology used by Zyblock M. (1996).

$$[4] \quad MLD = \frac{1}{n} \sum_g \ln \left(\frac{\bar{y}}{y_g} \right)$$

When considering sub-groups of the population, this indicator is additively decomposable in two terms:

(i) the within group MLD - defined as the weighted sum of the MLD of each group - this indicates the distribution of income within specific groups, and the contribution of the inequality within each group to total inequality;

(ii) the between group MLD -- calculated as deviation of the average income of the group from the population mean income using constant weights -- indicates how much the total MLD is affected by differences in relative mean income between groups. This corresponds to the inverse of the relative income of each group described above.

$$[5] \quad MLD^t = \underbrace{\sum_g w_g^t \cdot MLD_g^t}_{\text{within MLD}} - \underbrace{\sum_g w_g^t \cdot \ln \left(\frac{y_g}{\bar{y}} \right)}_{\text{between MLD}}$$

Table 8: Decomposition of income inequality by sub-groups of the population

	Mid 1970			Mid 1980	Most recent
	Shares in total population (%) w_g^t	Within group MLD MLD_g^t	Mean disposable income y_g		
Working age head					
1) Household structure and work attachment⁽¹⁾ :					
1) WASANCWR					
2) WASANCNW					
3) WASACHWR					
4) WASACHNW					
5) WATANC2W					
6) WATANC1W					
7) WATANCNW					
8) WATACH2W					
9) WATACH1W					
10) WATACHNW					
TOTAL					
Retirement age head					
1) household structure and work attachment					
11) RASAWR					
12) RASANW					
13) RATA2W					
14) RATA1W					
15) RATA2W					
TOTAL					

(2) MLD are calculated by using the specification [4] on p.3 with the "bottom coded" values W_{ij}^* (see the section about bottom coding).

NOTE: Please verify that the total MLD using equation [5] is the same shown in Table 1.

The profile of incomes according to the age of individuals

The purpose of this section is to describe how the age-profile of household real incomes has evolved over the time and how its structure in terms of income sources has changed. This will be done by establishing for each period considered a static income distribution according with various age categories ("pseudo cohort") and by analysing how this distribution has been modified over the time.

Lifetime profiles should identify the following age categories :

- 1) 0 to 17 years old.
- 2) 18 to 25 years old.
- 3) 26 to 40 years old.
- 4) 41 to 50 years old.
- 5) 51 to 65 years old.
- 6) 66 to 75 years old.
- 7) over 75 years old.

Table 9 summarises the information required for each age category.

Table 9: Distribution of household disposable income by age category

	0-17 y.	18-25 y.	26-40 y.	41-50 y.	51-65 y.	66-75 y.	>75 y.	total
Mid 1970								
population share (%)								100%
mean disposable income in real terms								
% of individuals in :								
decile 1 ⁽¹⁾								
...								
decile 10 ⁽¹⁾								
TOTAL	100%	100%	100%	100%	100%	100%	100%	100%
% share of total disposable income:								
EH+ES+EO								
K								
SE								
TR								
-TA								
TOTAL	100%	100%	100%	100%	100%	100%	100%	100%
Household structure and work attachment:								
1) WASANCWR								
...								
15) RATA2W								
TOTAL								
Mid 1980								
Same as above ...								
Most recent								
Same as above ...								

(1) same ranking as in Table 1.

Households poverty

This last section will identify the proportion of individuals living in poor households, what are their income sources and characteristics of the household to which they belong (for instance, are they single mothers with children or members of a household with a jobless head).

Poverty is defined in relative and absolute terms:

- Relative poverty : the poverty threshold is expressed as a given percentage of the current median income in each year. Therefore, it changes (in real terms) over time.
- Absolute poverty: the poverty threshold remains constant (in real terms) over time.

We use three indicators to characterise poverty :

H = *the headcount number of poor* : the number of individuals with disposable income per household equivalent member lower or equal to the poverty threshold expressed as a percentage of the total number of individuals in the population under consideration.

I = the income gap expressed as a % of the poverty threshold. It is calculated as the average gap between the poverty threshold and the disposable income of poor expressed as a percentage of the poverty threshold. Thus:

$$[13] \quad I = \frac{(z - \mu_p)}{z} = \frac{\left(\frac{1}{p} \sum_{i=1}^p \sum_j (z - W_{ij}) \right)}{z}$$

where p is the number of poor.

GP = the Gini coefficient calculated over the poor in each household category.

Table 10 gives an overview of the evolution of poverty (both absolute and relative), separately for the entire population, for the working- and retirement age population. Each panel is as follows:

Table 10a: Evolution of absolute and relative poverty

	Mid 1970	Mid 1980	Most recent
Relative poverty :			
Poverty threshold = 60 per cent of the current median income			
H			
I			
GP			
Poverty threshold = 50 per cent of the current median income			
Poverty threshold = 40 per cent of the current median income			
Poverty threshold = 30 per cent of the current median income			
H			
Absolute poverty :			
Poverty threshold = 60 per cent of the median income in the initial year :			
Poverty threshold = 50 per cent of the median income in the initial year :			
Poverty threshold = 40 per cent of the median income in the initial year :			
Poverty threshold = 30 per cent of the median income in the initial year :			

Table 11 gives a more detailed description of which kind of households are poor and how net transfers are effective in bringing households out of poverty. The household characterisation is the same in the previous sections.

In the following tables, the poverty threshold is set at 50 per cent of the current median disposable income, and poverty is expressed in terms of the headcount ratio (H).

Table 11: Poverty rates before and after taxes and transfers, by household type

Head count ratio

	Mid 1970s		Mid 1980s	Most recent
	Before taxes and transfers	After taxes and transfers		
Working age head				
1) Household structure and work attachment				
1) WASANCWR				
2) WASANCNW				
...				
10) WATACHNW				
TOTAL				
Retirement age head				
1) Household structure and work attachment				
11) RASAWR				
...				
15) RATA2W				
TOTAL				

In the first columns of Table 11, poverty indicators for the 1970-period are based on market income M_{ij} (see identity [3]); individual with market income lower or equal to half of the median disposable income are counted as poor; in other words, the poverty threshold is the same as in Table 10). In the second column, poverty indicators are based on disposable income

Table 12 is the analogue of the above for groups identified on the basis of the age of individuals

Table 12: Poverty by age of individuals before and after taxes and transfers

	Mid 1970s		Mid 1980s	Most recent
	Before taxes and transfers	After taxes and transfers		
Age of individuals				
0 - 17 y				
18 - 25y				
26 - 40y				
41 - 50y				
51 - 65 y				
65 - 75y				
above 75y				
TOTAL				

Table 1: Evolution of Income Inequality over Time

	Entire population mid-80s		Entire population mid-90s		Entire population most recent		Working age population (4) mid-80s		Working age population (4) mid-90s		Working age population (4) most recent		Retirement age population (5) mid-80s		Retirement age population (5) mid-90s		Retirement age population (5) most recent	
Total number of individuals	(3)	3935940	(3)	272640	(3)	7339568	(3)	4633693	(3)	4633693	(3)	4633693	(3)		(3)		(3)	
Total number of households		1381292		252618		2929141												
	Upper Bound Value	Real Mean Income	Upper Bound Value	Real Mean Income	Upper Bound Value	Real Mean Income	Upper Bound Value	Real Mean Income	Upper Bound Value	Real Mean Income	Upper Bound Value	Real Mean Income	Upper Bound Value	Real Mean Income	Upper Bound Value	Real Mean Income	Upper Bound Value	Real Mean Income
Decile 1	5358.0	4002.4	6660.8	5237.4	5760.0	4424.8	7159.9	5424.0	6377.2	4495.2	4836.6	4003.2	5838.9	5102.5	6015.4	4661.1		
Decile 2	6448.8	5872.8	8204.0	7427.4	6995.5	6450.6	8869.2	8018.8	8339.0	7391.6	4836.6	4695.2	5838.9	6741.8	6236.9	6558.9		
Decile 3	7254.9	6792.1	9226.1	8877.1	8092.8	7588.6	10347.9	9636.2	9880.8	9117.2	5700.0	5399.7	7760.5	7293.0	8152.4	7713.0		
Decile 4	8197.0	7710.6	10670.7	10194.4	9270.2	8740.9	11796.8	11052.1	11206.5	10569.9	6448.8	6057.2	8647.5	8377.0	9498.0	8935.5		
Decile 5	9383.2	8719.2	12177.1	11502.4	10379.5	9823.8	13082.0	12402.2	12712.5	12005.3	7048.0	6709.7	10243.4	9479.2	10465.9	9982.9		
Decile 6	10450.0	9872.5	13485.8	12813.4	12463.2	11920.8	14633.4	13877.9	14246.9	13540.2	7980.0	7575.7	11234.3	10685.5	11753.1	11068.4		
Decile 7	11771.6	11089.9	15260.5	14331.2	14049.8	12725.7	16263.5	15379.1	15843.8	15098.6	9120.0	8613.6	12804.2	12042.3	13252.2	12370.2		
Decile 8	13313.1	12530.9	17221.0	16203.4	14639.0	13443.5	18991.7	17182.7	17986.9	16928.6	10479.3	9838.4	14634.1	13645.0	15111.2	14062.6		
Decile 9	15796.3	14445.4	20269.1	18640.4	16729.0	15639.4	21323.0	19441.2	21172.5	19431.7	13220.7	11696.5	17922.2	16177.1	18469.2	16480.0		
Decile 10	79060.0	19203.4	85365.9	25508.3	79060.0	20203.8	85365.9	26715.3	86189.6	25788.3	58407.0	16945.5	76348.9	23408.0	63802.7	23211.2		
TOTAL		10037.8		13075.5		10922		13932.2		13430.7		8110.5		11242.0		11508.1		
Real median income (4):		9283.2		12177.1		10382.0		13082.0		12712.5		7048.0		10243.4		10465.9		
MLD(2)	(3)	0.103		0.101		0.056		0.100	(3)	0.054		0.102		0.104	(3)	0.052		
SCV		0.199		0.213		0.225		0.202		0.213		0.250		0.245		0.230		
Gini		0.236		0.238		0.252		0.233		0.246		0.245		0.249		0.243		
Gini before taxes and transfers																		
Remarks																		
P90/P10 including zero-income observations		2.9		3.0		2.9		3.0		3.3		2.9		3.1		3.1		

(1) The upper bound value is the value of the real income at the upper breaking point of the corresponding decile. Therefore, the upper bound value of decile 1 corresponds to the income of the 10 per cent up from the bottom individual (referred to as D1 value); that of decile 9, to the income of the 90 per cent up from the bottom individual (referred to as the D9 value) and that of decile 10, to the highest (possibly top coded) income value.

(2) MLD calculations are based on "bottom coded" values W_i^* (see the section about bottom coding).

(3) Shaded cells are empty.

(4) Population 18 to 65 years old.

(5) Population above 65 years old.

Equivalence elasticity = 0.5

Deflator=CPI, in AS, 1983=100

Table 2: Cumulative shares of income components by decile

	Entire population										Working age population (1)										Retirement age population (2)									
	EH	ES	EO	K	SE	TR	TA	EH+ES+SE+K+R-TA	EH	ES	EO	K	SE	TR	TA	EH+ES+SE+K+R-TA	EH	ES	EO	K	SE	TR	TA	EH+ES+SE+K+R-TA						
mid-80s																														
Decile 1						11.9%		4.0%						8.3%		4.1%							15.1%		7.3%					
Decile 2						22.4%		9.8%						16.2%		9.9%							27.3%		9.0%					
Decile 3						32.7%		16.4%						24.5%		16.9%							38.7%		19.4%					
Decile 4						43.0%		24.3%						33.3%		24.9%							49.8%		23.5%					
Decile 5						53.7%		32.9%						43.7%		33.8%							60.9%		32.9%					
Decile 6						63.2%		42.9%						54.0%		43.8%							69.4%		42.8%					
Decile 7						72.6%		54.0%						65.7%		55.1%							77.1%		54.1%					
Decile 8						81.2%		66.4%						76.8%		67.4%							83.7%		63.4%					
Decile 9						90.0%		80.8%						87.8%		81.5%							91.2%		79.0%					
Decile 10	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%						
mid-90s																														
Decile 1						9.8%		4.0%						8.7%		3.9%							10.8%		4.9%					
Decile 2						20.2%		9.7%						17.5%		9.7%							22.3%		10.0%					
Decile 3						30.4%		16.4%						26.8%		16.5%							33.0%		17.1%					
Decile 4						40.8%		24.2%						37.6%		24.5%							42.6%		24.1%					
Decile 5						50.3%		32.7%						47.3%		33.5%							51.6%		32.2%					
Decile 6						60.8%		42.9%						57.8%		43.1%							61.7%		41.8%					
Decile 7						70.0%		53.7%						67.7%		54.4%							70.3%		51.5%					
Decile 8						80.6%		66.8%						79.7%		66.6%							79.8%		65.0%					
Decile 9						89.4%		80.5%						89.8%		81.0%							87.9%		79.0%					
Decile 10	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%						
most recent																														
Decile 1						5.9%		3.4%						8.4%		3.3%							5.2%		4.1%					
Decile 2						15.5%		8.8%						19.4%		8.8%							13.3%		9.8%					
Decile 3						25.8%		15.5%						30.6%		15.6%							19.9%		16.5%					
Decile 4						35.9%		23.2%						41.3%		23.5%							30.4%		24.2%					
Decile 5						46.8%		32.0%						51.8%		32.4%							37.9%		32.9%					
Decile 6						56.9%		41.9%						62.6%		42.5%							46.8%		42.5%					
Decile 7						67.3%		53.1%						72.2%		53.7%							58.3%		53.3%					
Decile 8						77.6%		65.7%						81.7%		66.3%							69.0%		65.5%					
Decile 9						88.1%		80.3%						89.9%		80.8%							82.6%		79.8%					
Decile 10	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%						

Notes:

As an example, the shaded cell contains the cumulative share of transfers received by households/individuals of decile 1 and 2 as a percentage of total transfers (given that households/individuals are ranked by ascending values of disposable income per equivalent household member).

(1) Population 18 to 65 years old.

(2) Population above 65 years old.

Elasticity = 0.5

Table 3: Average income structure by decile

	Entire population										Working age population (2)										Retirement age population (3)									
	% Shares of Income Sources in each Decile					% Shares of Income Sources in each Decile					% Shares of Income Sources in each Decile					% Shares of Income Sources in each Decile					% Shares of Income Sources in each Decile									
	EH (1)	ES (1)	EO (1)	K (1)	SE (1)	IR (1)	-TA (1)	TOTAL	EH (1)	ES (1)	EO (1)	K (1)	SE (1)	IR (1)	-TA (1)	TOTAL	EH (1)	ES (1)	EO (1)	K (1)	SE (1)	IR (1)	-TA (1)	TOTAL						
mid-80s							100.0%									100.0%								100.0%						
Decile 1					56.1%		100.0%							24.9%		100.0%								164.3%						
Decile 2					34.3%		100.0%							17.0%		100.0%								549.9%						
Decile 3					29.8%		100.0%							14.8%		100.0%								87.2%						
Decile 4					24.5%		100.0%							13.7%		100.0%								213.8%						
Decile 5					23.5%		100.0%							14.4%		100.0%								94.2%						
Decile 6					18.0%		100.0%							12.9%		100.0%								67.6%						
Decile 7					14.1%		100.0%							12.8%		100.0%								54.0%						
Decile 8					13.2%		100.0%							11.3%		100.0%								56.8%						
Decile 9					11.6%		100.0%							9.6%		100.0%								37.8%						
Decile 10					9.8%		100.0%							8.2%		100.0%								33.4%						
TOTAL					18.9%		100.0%							12.4%		100.0%								79.3%						
mid-90s							100.0%							27.0%		100.0%								172.6%						
Decile 1					46.8%		100.0%							18.5%		100.0%								173.5%						
Decile 2					34.2%		100.0%							16.3%		100.0%								116.0%						
Decile 3					28.9%		100.0%							16.3%		100.0%								106.6%						
Decile 4					25.3%		100.0%							13.1%		100.0%								85.5%						
Decile 5					21.4%		100.0%							13.2%		100.0%								81.5%						
Decile 6					19.4%		100.0%							10.5%		100.0%								69.3%						
Decile 7					16.4%		100.0%							11.9%		100.0%								54.2%						
Decile 8					15.2%		100.0%							8.5%		100.0%								44.9%						
Decile 9					12.3%		100.0%							6.4%		100.0%								44.5%						
Decile 10					10.3%		100.0%							12.1%		100.0%								77.4%						
TOTAL					19.0%		100.0%							29.1%		100.0%								81.7%						
most recent							100.0%							23.0%		100.0%								89.6%						
Decile 1					28.7%		100.0%							19.1%		100.0%								62.0%						
Decile 2					28.5%		100.0%							15.8%		100.0%								85.0%						
Decile 3					25.3%		100.0%							13.5%		100.0%								54.5%						
Decile 4					21.3%		100.0%							12.4%		100.0%								58.5%						
Decile 5					20.2%		100.0%							9.8%		100.0%								67.6%						
Decile 6					16.8%		100.0%							8.7%		100.0%								55.1%						
Decile 7					15.2%		100.0%							6.6%		100.0%								60.1%						
Decile 8					13.4%		100.0%							6.1%		100.0%								54.3%						
Decile 9					11.6%		100.0%							11.5%		100.0%								63.1%						
Decile 10					9.9%		100.0%									100.0%								100.0%						
TOTAL					16.3%		100.0%									100.0%								100.0%						

(1) All shares are expressed relative to disposable income.

(2) Population age 18 to 65 years old.

(3) Population over 65 years old.

Elasticity = 0.5

Notes:

As an example, the shaded cell contains the average share of the earning of the household spouse in households of the second decile (expressed as a percentage of disposable income of all households of decile 2 and given that households/individuals are ranked by ascending values of disposable income per equivalent household member).

Table 6bis: Percentage of type of transfer in disposable income of each decile

	Entire population										Working age population (1)										Retirement age population (2)									
	% Shares of type of transfers in each Decile					IR					% Shares of type of transfers in each Decile					IR					% Shares of type of transfers in each Decile					IR				
	OAP	DB	OIDD	SP	FCB	UB	HB	OTH	TR		OAP	DB	OIDD	SP	FCB	UB	HB	OTH	TR		OAP	DB	OIDD	SP	FCB	UB	HB	OTH	TR	
mid-80s																														
Decile 1	45.0%				8.0%	3.1%		56.1%							6.2%	4.6%			24.9%						0.5%				164.3%	
Decile 2	26.8%				6.5%	1.0%		34.3%						14.1%					17.0%						1.6%			549.9%		
Decile 3	23.3%				5.8%	0.7%		29.8%						10.7%	1.5%				14.8%						0.4%			87.2%		
Decile 4	18.9%				5.0%	0.6%		24.5%						8.8%	0.9%				13.7%						1.2%			213.8%		
Decile 5	18.7%				3.9%	0.9%		23.5%						9.7%	1.3%				14.4%						0.3%			94.2%		
Decile 6	13.2%				3.8%	1.1%		18.0%						7.9%	1.6%				12.9%						0.3%			67.6%		
Decile 7	12.4%				2.7%	1.0%		16.1%						8.7%	1.5%				12.8%						0.2%			54.0%		
Decile 8	10.4%				2.2%	0.8%		13.2%						8.2%	0.8%				11.3%						0.4%			56.8%		
Decile 9	9.3%				1.9%	0.5%		11.6%						7.2%	0.4%				9.6%						0.3%			37.8%		
Decile 10	8.5%				1.0%	0.3%		9.8%						6.6%	0.5%				8.2%						0.1%			33.4%		
TOTAL	15.0%				3.2%	0.7%		18.9%						2.8%	1.1%				12.4%						0.3%			79.3%		
mid-90s																														
Decile 1	34.1%				9.2%	3.5%		46.8%						13.7%					27.0%						0.5%			172.6%		
Decile 2	26.3%				6.5%	1.4%		34.2%						10.5%	2.0%				18.5%						0.7%			173.5%		
Decile 3	22.1%				5.5%	1.4%		28.9%						10.4%	1.9%				16.3%						0.6%			116.0%		
Decile 4	18.9%				5.3%	1.1%		25.3%						10.2%	1.6%				15.3%						0.3%			106.6%		
Decile 5	16.1%				4.8%	0.5%		21.4%						8.8%	0.7%				13.1%						0.4%			85.5%		
Decile 6	14.6%				4.2%	0.5%		19.4%						8.6%	0.9%				13.2%						0.5%			81.5%		
Decile 7	12.2%				3.5%	0.8%		16.4%						7.7%	1.1%				10.5%						0.7%			69.3%		
Decile 8	12.3%				2.7%	0.3%		15.2%						8.9%	0.4%				11.9%						0.3%			54.2%		
Decile 9	10.0%				1.9%	0.3%		12.3%						6.3%	0.5%				8.5%						0.3%			44.9%		
Decile 10	9.1%				1.1%	0.1%		10.3%						5.1%	0.1%				6.4%						0.1%			44.5%		
TOTAL	14.8%				3.5%	0.7%		19.0%						8.1%	1.0%				12.1%						0.4%			77.4%		
most recent																														
Decile 1	19.5%				4.8%	4.3%		28.7%						13.0%					29.1%						0.4%			81.7%		
Decile 2	22.4%				4.1%	2.0%		28.5%						11.9%					23.0%						0.5%			89.6%		
Decile 3	20.4%				3.8%	1.1%		25.3%						10.7%	1.7%				19.1%						0.2%			62.0%		
Decile 4	17.2%				3.3%	0.8%		21.3%						10.4%	1.0%				15.8%						0.3%			85.0%		
Decile 5	17.0%				2.7%	0.6%		20.2%						8.5%	0.8%				13.5%						0.1%			54.5%		
Decile 6	13.9%				2.4%	0.5%		16.8%						8.9%	0.7%				12.4%						0.1%			38.5%		
Decile 7	13.1%				1.8%	0.4%		13.4%						7.1%	0.5%				9.8%						0.2%			67.6%		
Decile 8	11.6%				1.4%	0.3%		11.5%						6.4%	0.4%				8.7%						0.2%			55.1%		
Decile 9	10.1%				1.2%	0.4%		11.6%						4.9%	0.4%				6.6%						0.2%			40.1%		
Decile 10	9.0%				0.8%	0.1%		9.9%						5.0%	0.2%				6.1%						0.1%			54.3%		
TOTAL	13.6%				2.1%	0.7%		16.3%						7.6%	1.0%				11.3%						0.2%			63.1%		

As an example, the shaded cell contains the cumulative share of family cash benefits received by households/individuals of decile 1 and 2 as a percentage of total family cash benefits (given that households/individuals are ranked by ascending values of disposable income per equivalent household member).
 (1) Population age 18 to 65 years old.
 (2) Population over 65 years old.

Transfer types:

- OAP: old-age cash benefits
- DB: disability benefits
- OIDD: occupational injury and disease benefits
- SP: survivors' benefits
- FCB: family cash benefits
- UB: unemployment benefits
- HB: housing benefits
- OTH: benefits on other contingencies

Elasticity = 0.5

Table 7: Household structure and inequality (elasticity = 0.5)

	Household with a head below 65										Household with a head above 65											
	Working age head, WA					Retirement age head, RA					Working age head, WA					Retirement age head, RA						
	Single-adult no children WASANCW single adult	Single adult with children WASACHW single adult	Two-adults households with no children WATANC2 Two adults	Two-adults households with children (2) WATACHN Two adults	WATOTAL all	Single-adult no children WASANCW single adult	Single adult with children WASACHW single adult	Two-adults households with no children WATANC2 Two adults	Two-adults households with children (2) WATACHN Two adults	WATOTAL all	Single-adult no children WASANCW single adult	Single adult with children WASACHW single adult	Two-adults households with no children WATANC2 Two adults	Two-adults households with children (2) WATACHN Two adults	WATOTAL all	Single-adult no children WASANCW single adult	Single adult with children WASACHW single adult	Two-adults households with no children WATANC2 Two adults	Two-adults households with children (2) WATACHN Two adults	WATOTAL all		
mid-80s	6893.77	7973.13	4212.91	10881.21	9074.70	8328.05	5997.04	10344.20	6332.67	6836.26	13176.19	12709.76	8054.17	8383.94	12709.76	13176.19	8054.17	8383.94	12709.76	13176.19	8054.17	8383.94
% Individuals in each group	3.4%	2.4%	1.4%	5.8%	3.4%	22.9%	27.8%	83.4%	0.0%	6.4%	0.7%	2.1%	7.3%	16.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Decile 1	2.3%	34.5%	20.6%	69.3%	14.0%	0.9%	4.8%	7.7%	81.0%	33.2%	0.5%	0.9%	21.6%	22.7%	0.5%	0.9%	21.6%	22.7%	0.5%	0.9%	21.6%	22.7%
Decile 2	2.7%	16.4%	10.0%	46.5%	10.5%	0.8%	19.4%	9.1%	0.0%	22.0%	0.0%	3.8%	11.8%	14.2%	0.0%	3.8%	11.8%	14.2%	0.0%	3.8%	11.8%	14.2%
Decile 3	4.3%	13.6%	10.5%	5.6%	17.7%	3.6%	7.8%	9.4%	0.0%	14.4%	0.0%	5.6%	11.9%	11.6%	0.0%	5.6%	11.9%	11.6%	0.0%	5.6%	11.9%	11.6%
Decile 4	11.4%	10.2%	13.5%	5.1%	11.0%	1.6%	7.6%	10.2%	0.0%	9.9%	2.8%	8.0%	13.1%	10.8%	2.8%	8.0%	13.1%	10.8%	2.8%	8.0%	13.1%	10.8%
Decile 5	15.9%	8.2%	8.7%	2.2%	10.8%	3.9%	12.7%	6.3%	0.0%	10.7%	7.5%	13.3%	10.4%	12.8%	7.5%	13.3%	10.4%	12.8%	7.5%	13.3%	10.4%	12.8%
Decile 6	15.4%	12.5%	2.7%	12.9%	9.1%	6.3%	12.9%	10.7%	0.0%	10.7%	9.9%	9.2%	7.7%	6.9%	9.9%	9.2%	7.7%	6.9%	9.9%	9.2%	7.7%	6.9%
Decile 7	13.1%	4.1%	1.0%	14.3%	10.7%	4.6%	6.4%	10.7%	0.0%	2.8%	4.2%	11.7%	14.7%	7.4%	4.2%	11.7%	14.7%	7.4%	4.2%	11.7%	14.7%	7.4%
Decile 8	9.5%	2.5%	1.7%	17.9%	10.2%	5.0%	11.7%	10.8%	0.0%	0.7%	10.7%	12.4%	6.4%	5.2%	0.7%	10.7%	12.4%	6.4%	5.2%	0.7%	10.7%	12.4%
Decile 9	12.5%	1.5%	2.4%	17.8%	17.8%	3.0%	11.8%	10.8%	19.0%	2.2%	31.1%	17.3%	4.0%	6.1%	2.2%	31.1%	17.3%	4.0%	6.1%	2.2%	31.1%	17.3%
Decile 10	13.0%	3.3%	0.0%	10.8%	6.0%	12.3%	3.3%	10.9%	0.0%	2.3%	20.2%	17.6%	3.2%	5.4%	2.3%	20.2%	17.6%	3.2%	5.4%	2.3%	20.2%	17.6%
TOTAL	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
mid-90s	13263	8151	12486	10793	17516	12523	11300	15256	9954	7259	13372	14686	11508	11460	13372	14686	11508	11460	13372	14686	11508	11460
% Individuals in each group	4.4%	2.3%	5.1%	2.9%	8.7%	4.0%	3.4%	34.9%	17.9%	1.0%	84.5%	6.6%	6.4%	15.5%	6.6%	6.4%	15.5%	6.6%	6.4%	15.5%	6.6%	15.5%
Decile 1	5.0%	43.2%	11.1%	23.5%	0.5%	7.8%	11.1%	18.0%	4.1%	18.0%	8.5%	27.7%	17.8%	17.8%	4.1%	18.0%	27.7%	17.8%	4.1%	18.0%	27.7%	17.8%
Decile 2	7.1%	17.0%	14.3%	10.9%	1.6%	11.4%	15.3%	2.3%	22.3%	17.3%	9.3%	19.7%	3.5%	14.8%	9.3%	19.7%	3.5%	14.8%	9.3%	19.7%	3.5%	14.8%
Decile 3	12.5%	12.1%	10.0%	9.3%	2.3%	10.2%	13.9%	6.3%	13.2%	11.1%	9.5%	13.8%	1.3%	12.0%	13.8%	1.3%	12.0%	13.8%	1.3%	12.0%	13.8%	1.3%
Decile 4	12.0%	6.4%	10.3%	13.2%	4.5%	12.4%	14.8%	9.3%	12.0%	13.6%	10.1%	8.4%	1.5%	9.6%	13.6%	10.1%	8.4%	1.5%	9.6%	13.6%	10.1%	8.4%
Decile 5	16.1%	6.4%	11.2%	6.7%	6.2%	12.7%	9.7%	11.0%	8.0%	2.3%	9.8%	8.1%	6.7%	8.7%	9.8%	8.1%	6.7%	8.7%	9.8%	8.1%	6.7%	8.7%
Decile 6	9.1%	2.5%	10.5%	9.2%	9.7%	12.2%	12.5%	7.7%	3.4%	10.5%	10.5%	5.1%	14.5%	9.8%	10.5%	5.1%	14.5%	9.8%	10.5%	5.1%	14.5%	9.8%
Decile 7	11.3%	3.1%	7.6%	5.8%	13.9%	9.6%	4.5%	14.0%	4.9%	2.0%	10.2%	10.0%	6.7%	7.4%	10.2%	10.0%	6.7%	7.4%	10.2%	10.0%	6.7%	7.4%
Decile 8	12.2%	5.4%	8.2%	10.0%	16.7%	9.9%	8.7%	14.8%	4.1%	2.5%	11.2%	19.3%	6.8%	7.4%	11.2%	19.3%	6.8%	7.4%	11.2%	19.3%	6.8%	7.4%
Decile 9	5.9%	1.4%	6.2%	6.1%	20.7%	6.4%	5.9%	3.8%	0.0%	0.0%	10.2%	50.7%	3.3%	20.3%	10.2%	50.7%	3.3%	20.3%	10.2%	50.7%	3.3%	20.3%
Decile 10	8.8%	2.6%	10.7%	5.3%	24.1%	7.4%	3.5%	14.2%	2.4%	0.2%	10.7%	9.3%	11.7%	6.3%	10.7%	9.3%	11.7%	6.3%	10.7%	9.3%	11.7%	6.3%
TOTAL	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
most recent	13902	9001	8396	5301	17433	13244	11233	12849	9232	6864	12757	13887	11909	11725	12757	13887	11909	11725	12757	13887	11909	11725
% Individuals in each group	4.8%	2.0%	2.8%	0.5%	15.1%	7.8%	4.6%	31.8%	13.5%	0.8%	83.7%	4.9%	2.3%	16.3%	4.9%	2.3%	16.3%	4.9%	2.3%	16.3%	4.9%	16.3%
Decile 1	2.1%	23.9%	24.1%	70.1%	3.2%	8.8%	13.7%	9.2%	14.5%	39.5%	10.1%	15.0%	7.7%	9.5%	15.0%	7.7%	9.5%	15.0%	7.7%	9.5%	15.0%	9.5%
Decile 2	2.6%	21.6%	20.3%	18.9%	3.1%	6.0%	11.4%	6.4%	43.8%	23.6%	9.1%	23.6%	7.5%	14.5%	23.6%	7.5%	14.5%	23.6%	7.5%	14.5%	23.6%	14.5%
Decile 3	7.3%	14.7%	20.7%	6.6%	2.8%	9.2%	11.7%	6.5%	20.6%	12.6%	9.5%	17.8%	3.6%	13.0%	17.8%	3.6%	13.0%	17.8%	3.6%	13.0%	17.8%	13.0%
Decile 4	16.1%	11.0%	10.5%	2.9%	4.9%	8.0%	13.6%	4.9%	15.9%	11.1%	9.8%	14.0%	5.9%	6.8%	14.0%	5.9%	6.8%	14.0%	5.9%	6.8%	14.0%	6.8%
Decile 5	10.2%	6.2%	10.5%	0.5%	4.4%	11.9%	13.6%	11.4%	10.6%	3.2%	9.8%	7.2%	6.3%	11.1%	9.8%	7.2%	6.3%	11.1%	9.8%	7.2%	6.3%	11.1%
Decile 6	15.9%	7.0%	4.9%	0.4%	5.8%	11.1%	9.5%	12.7%	8.0%	1.8%	10.0%	7.9%	6.7%	9.0%	10.0%	7.9%	6.7%	9.0%	10.0%	7.9%	6.7%	9.0%
Decile 7	12.9%	6.0%	3.2%	0.0%	10.6%	13.2%	9.3%	4.0%	12.9%	4.0%	10.2%	5.4%	4.7%	8.8%	10.2%	5.4%	4.7%	8.8%	10.2%	5.4%	4.7%	8.8%
Decile 8	13.4%	3.2%	3.2%	0.0%	16.3%	11.0%	7.7%	11.8%	2.9%	0.6%	10.3%	14.6%	14.2%	8.3%	10.3%	14.6%	14.2%	8.3%	10.3%	14.6%	14.2%	8.3%
Decile 9	10.2%	3.2%	1.2%	0.0%	22.7%	10.8%	11.3%	11.3%	1.8%	0.0%	10.3%	15.8%	11.6%	7.5%	10.3%	15.8%	11.6%	7.5%	10.3%	15.8%	11.6%	7.5%
Decile 10	9.4%	1.7%	0.9%	0.4%	28.4%	10.0%	5.9%	8.0%	1.6%	0.0%	10.3%	21.6%	6.4%	7.3%	10.3%	21.6%	6.4%	7.3%	10.3%	21.6%	6.4%	7.3%
TOTAL	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 8: Decomposition of income inequality by sub-groups of the population

	Most recent Shares in total population (%)	Within group MLD	Mean disposable income
	W_g^t	MLD_g^t	y_g
Working age head			
1) Household structure and work attachment ¹⁾ :			
1) WASANCWR	0.048	0.034	13902.3
2) WASANGNW	0.020	0.045	9000.7
3) WASACHWR	0.028	0.046	8396.1
4) WASACHNW	0.005	0.050	5300.6
5) WATANC2W	0.151	0.039	17433.4
6) WATANC1W	0.078	0.048	13243.8
7) WATANCNW	0.046	0.047	11232.5
8) WATACH2W	0.318	0.049	12849.2
9) WATACH1W	0.135	0.027	9231.6
10) WATACHNW	0.008	0.028	6864.1
TOTAL	0.837	0.056	12757.1
Retirement age head			
1) Household structure and work attachment			
11) RASAWR	0.000	0.002	9040.6
12) RASANW	0.049	0.048	9482.1
13) RATA2W	0.013	0.046	15373.1
14) RATA1W	0.023	0.053	13887.5
15) RATA2W	0.078	0.049	11908.8
TOTAL	0.163	0.051	11724.9

1) Household structure and work attachment.

Elasticity = 0.5

Table 9: Distribution of household disposable income by age category (elasticity = 0.5)

	0-17 y.	18-25 y.	26-40 y.	41-50 y.	51-65 y.	66-75 y.	>75 y.	TOTAL
mid-80s								
Population Share (%)	24.7%	11.7%	22.1%	11.5%	15.3%	9.3%	5.4%	100.0%
Mean Disposable Income in Real Terms	9012	11046	10441	11743	10905	8220	7923	10038
Structure by Deciles (%) (1)								
Decile 1	9.8%	8.7%	5.7%	4.4%	8.8%	22.4%	26.3%	10.0%
Decile 2	13.4%	4.9%	10.0%	5.1%	6.9%	14.5%	16.1%	10.0%
Decile 3	13.0%	6.3%	8.9%	6.4%	7.8%	12.5%	12.3%	9.7%
Decile 4	13.7%	7.2%	10.5%	7.4%	8.7%	11.9%	9.5%	10.3%
Decile 5	10.3%	9.3%	10.3%	8.9%	9.7%	10.0%	9.7%	9.9%
Decile 6	11.4%	9.7%	10.9%	11.0%	9.7%	7.0%	6.8%	10.1%
Decile 7	8.6%	12.4%	10.8%	12.0%	11.7%	6.6%	5.1%	10.0%
Decile 8	8.1%	12.7%	11.2%	13.0%	11.2%	5.4%	4.6%	9.9%
Decile 9	6.9%	15.2%	10.9%	14.1%	11.7%	5.1%	4.9%	10.0%
Decile 10	4.9%	13.6%	10.9%	17.5%	13.9%	4.6%	4.7%	10.0%
TOTAL	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Structure by Sources (%)								
EH+ES+EO								
K								
SE								
TR								
-TA								
TOTAL								
mid-90s								
Population Share (%)	21.4%	12.1%	24.2%	12.7%	15.7%	8.2%	5.7%	100.0%
Mean Disposable Income in Real Terms	11671	14194	13182	15073	13963	11807	10429	13075
Structure by Deciles (%)								
Decile 1	10.9%	8.9%	8.6%	4.7%	8.5%	15.9%	22.3%	10.0%
Decile 2	13.0%	6.8%	9.0%	6.7%	8.6%	13.3%	18.1%	10.1%
Decile 3	12.7%	6.6%	9.8%	7.3%	8.4%	11.8%	13.1%	9.8%
Decile 4	12.6%	7.1%	10.7%	7.6%	9.6%	9.5%	11.1%	10.0%
Decile 5	11.2%	7.5%	10.4%	8.4%	9.9%	9.0%	7.9%	9.6%
Decile 6	10.9%	10.6%	10.5%	10.7%	10.2%	10.2%	8.2%	10.4%
Decile 7	9.3%	11.4%	10.3%	11.4%	9.2%	8.4%	6.0%	9.8%
Decile 8	8.5%	13.1%	11.4%	12.7%	11.6%	8.1%	5.8%	10.6%
Decile 9	6.4%	13.8%	9.7%	14.2%	10.3%	7.0%	3.8%	9.6%
Decile 10	4.4%	14.3%	9.6%	16.4%	13.7%	6.8%	3.8%	10.0%
TOTAL	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Structure by Sources (%)								
EH+ES+EO								
K								
SE								
TR								
-TA								
TOTAL								
most recent								
Population Share (%)	21.2%	9.3%	24.7%	13.3%	16.7%	8.7%	6.0%	100.0%
Mean Disposable Income in Real Terms	10791	13877	12710	14159	13667	11823	11050	12589
Structure by Deciles (%)								
Decile 1	14.5%	9.3%	9.7%	6.9%	7.9%	8.4%	12.5%	10.0%
Decile 2	13.1%	6.6%	8.9%	6.9%	8.0%	13.2%	16.6%	10.0%
Decile 3	12.9%	6.9%	9.2%	7.6%	8.6%	12.5%	14.5%	10.0%
Decile 4	11.9%	8.0%	10.5%	8.0%	8.3%	11.5%	11.6%	10.0%
Decile 5	11.1%	7.3%	9.9%	8.3%	10.5%	12.6%	9.1%	10.0%
Decile 6	10.2%	10.0%	10.1%	9.8%	9.3%	9.9%	8.5%	10.0%
Decile 7	8.5%	10.4%	10.7%	10.6%	11.5%	9.2%	7.6%	10.0%
Decile 8	7.4%	12.0%	11.0%	12.4%	10.7%	8.6%	6.9%	10.0%
Decile 9	6.1%	14.9%	10.4%	15.0%	11.9%	7.2%	6.5%	10.0%
Decile 10	4.4%	14.6%	9.7%	14.6%	13.3%	6.9%	6.4%	10.0%
TOTAL	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Structure by Sources (%)								
EH+ES+EO								
K								
SE								
TR	0.6%	2.8%	7.8%	7.8%	30.0%	61.9%	68.5%	16.3%
-TA								
TOTAL	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Household structure and work attachment								
1) WASANCWR	0.0%	5.2%	10.9%	7.0%	3.9%	0.0%	0.0%	3.4%
2) WASANCNW	0.0%	1.1%	0.7%	1.4%	9.0%	0.0%	0.0%	2.4%
3) WASACHWR	7.6%	1.8%	3.2%	1.9%	0.3%	0.0%	0.0%	2.2%
4) WASACHNW	2.4%	0.3%	0.5%	0.2%	0.1%	0.0%	0.0%	1.4%
5) WATANC2W	0.0%	32.9%	17.7%	26.9%	21.9%	1.3%	3.3%	12.3%
6) WATANC1W	0.0%	9.6%	5.9%	8.3%	22.5%	2.3%	4.0%	5.8%
7) WATANCNW	0.0%	3.0%	1.0%	0.9%	21.3%	2.1%	2.6%	3.4%
8) WATACH2W	56.8%	36.5%	37.2%	37.8%	9.0%	4.1%	4.6%	22.9%
9) WATACH1W	29.5%	6.6%	18.1%	11.5%	3.1%	1.0%	1.3%	27.8%
10) WATACHNW	1.5%	0.7%	0.7%	0.7%	0.8%	0.0%	0.2%	1.7%
11) RASAWR	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%
12) RASANW	0.1%	0.0%	0.0%	0.0%	0.0%	25.7%	44.1%	6.4%
13) RATA2W	0.7%	1.0%	1.5%	0.9%	0.9%	3.4%	1.5%	0.7%
14) RATA1W	0.5%	0.8%	2.1%	1.6%	1.7%	9.7%	4.6%	2.1%
15) RAIANW	0.9%	0.4%	0.5%	0.9%	5.5%	50.2%	33.9%	7.3%
TOTAL	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 10: Evolution of "absolute" and "relative" poverty

Poverty threshold	Poverty indicator	mid-80s		mid-90s		most recent	
		Before taxes and transfers	After taxes and transfers	Before taxes and transfers	After taxes and transfers	Before taxes and transfers	After taxes and transfers
Relative poverty							
Poverty threshold = 60 per cent of the current median income							
	H		0.114		0.137		0.156
	I						0.282
	GP						0.166
Poverty threshold = 50 per cent of the current median income							
	H		0.061		0.074		0.093
	I		0.276		0.207		0.300
	GP		0.206		0.135		0.177
Poverty threshold = 40 per cent of the current median income							
	H						0.054
	I						0.305
	GP						0.180
Poverty threshold = 30 per cent of the current median income							
	H						0.027
	I						0.324
	GP						0.184
"Absolute" poverty							
Poverty threshold = 60 per cent of the median income in the initial year :							
	H				0.047		0.084
	I						0.707
	GP						0.178
Poverty threshold = 50 per cent of the median income in the initial year :							
	H				0.023		0.054
	I				0.296		0.700
	GP				0.185		0.181
Poverty threshold = 40 per cent of the median income in the initial year :							
	H				0.047		0.031
	I						0.680
	GP						0.185
Poverty threshold = 30 per cent of the median income in the initial year :							
	H				0.023		0.017
	I				0.296		0.688
	GP				0.185		0.180

All poverty thresholds refer to the entire population

Relative poverty: poverty thresholds are fixed in terms of real median income in the current year

"Absolute" poverty: poverty thresholds are fixed in terms of real median income in the mid-1980s

(see wave II questionnaire)

H = head-count ratio

I = poverty gap ratio

PG = Gini coefficient among the poor

Elasticity = 0.5

Table 11: Poverty rates before and after taxes and transfers by household type

	mid-80s		mid-90s		most recent	
	Before taxes and transfers	After taxes and transfers	Before taxes and transfers	After taxes and transfers	Before taxes and transfers	After taxes and transfers
Working age head						
Household structure and work attachment						
1) WASANCWR		0.021		0.045		0.020
2) WASANCNW		0.269		0.397		0.219
3) WASACHWR		0.113		0.089		0.232
4) WASACHNW		0.620		0.208		0.676
5) WATANC2W		0.008		0.005		0.030
6) WATANC1W		0.020		0.048		0.075
7) WATANCNW		0.080		0.069		0.132
8) WATACH2W		0.011		0.007		0.086
9) WATACH1W		0.025		0.107		0.127
10) WATACHNW		0.291		0.157		0.356
Total		0.045		0.061		0.094
Retirement age head						
Household structure and work attachment						
11) RASAWR		0.810		0.041		0.055
12) RASANW		0.239		0.248		0.131
13) RATA2W		0.005		0.022		0.075
14) RATA1W		0.007		0.021		0.076
15) RATANW		0.111		0.081		0.062
Total		0.144		0.142		0.086
Age of individuals						
0 - 17y		0.055		0.073		
18 - 25y		0.065		0.067		
26 - 40y		0.031		0.062		
41 - 50y		0.022		0.034		
51 - 65y		0.052		0.064		
66 - 75y		0.143		0.126		
above 75		0.164		0.182		
Total		0.061		0.074		

All poverty thresholds refer to the entire population (50% of median income in each year).

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